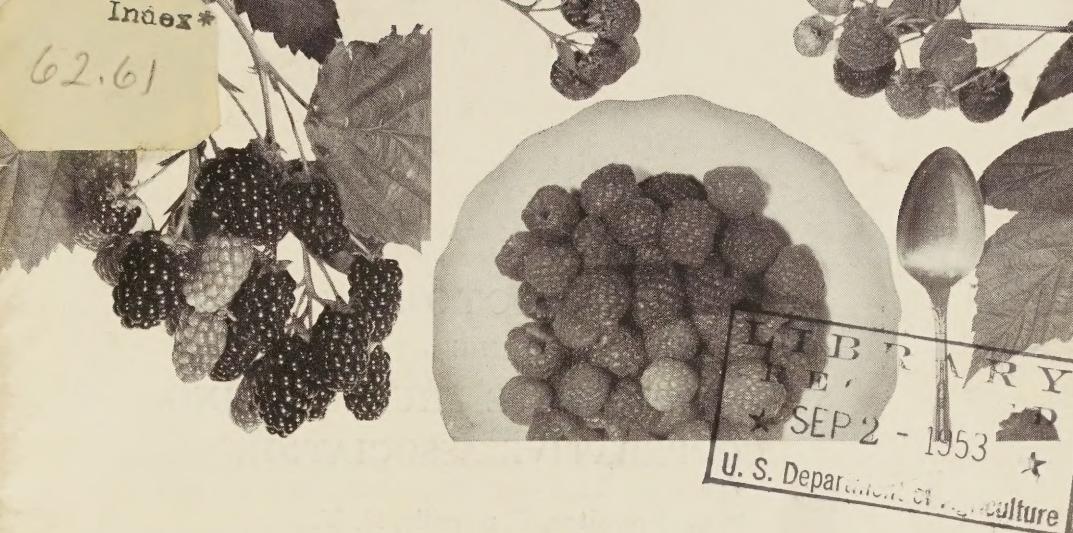


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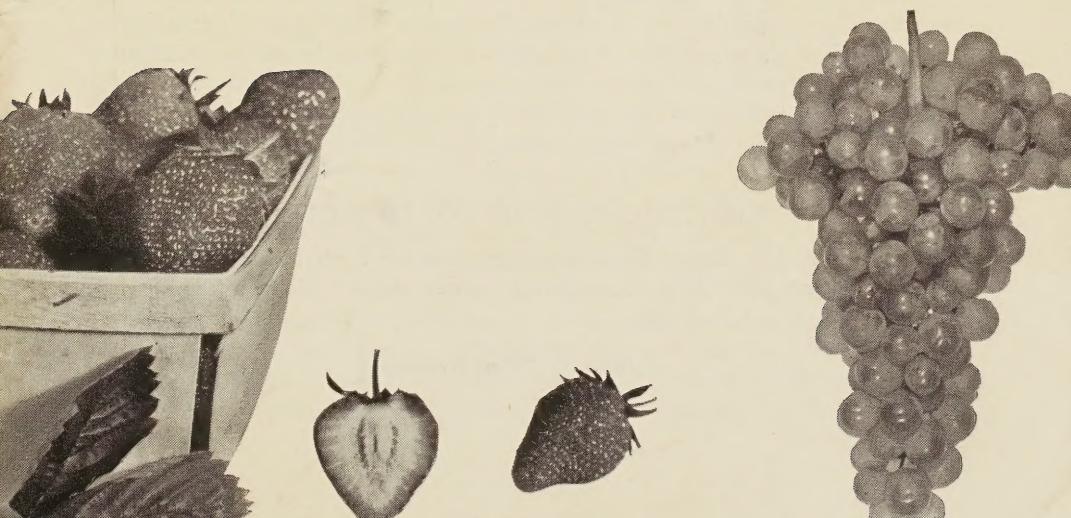


A Catalog of New Fruits

1953-54

**NEW YORK STATE FRUIT TESTING
COOPERATIVE ASSOCIATION**

GENEVA, NEW YORK



DIRECTORS
OF THE
NEW YORK STATE FRUIT TESTING
COOPERATIVE ASSOCIATION

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HENRY O. BENNETT, Manager, Geneva, N. Y.

IDENTIFICATION OF COVER PICTURES

Upper left: Bailey Blackberry. *Upper right:* September Raspberry.
Lower left: Erie Strawberry. *Lower right:* Romulus Grape.

Photos by Robert Wesselmann

A CATALOG OF NEW FRUITS

1953-1954

MOSTLY ORIGINATED AT THE NEW YORK STATE
AGRICULTURAL EXPERIMENT STATION

ORGANIZATION AND PURPOSE OF THE NEW YORK STATE FRUIT TESTING COOPERATIVE ASSOCIATION, INC.

The New York State Fruit Testing Cooperative Association, Inc., was organized in 1918 for the purpose of introducing and testing new fruits recommended as worthy of trial by the New York State Agricultural Experiment Station. No funds have ever been appropriated for the support of this Association and therefore a sufficient charge is made to defray expenses. The policy of the Association has been to grow only enough stock to meet the demands of its members and non-members. The growth of the Association since its inception has been normal and even during "the years of depression" its membership steadily increased. At this time the membership is approximately 3000 and altho New York and its adjoining states have the highest proportion, all the states except one and many foreign countries are represented.

The only requirement for membership is that the tester must be a fruit grower. An annual fee of \$1.00 is levied, the fiscal year commencing September first. Paid-up members are entitled to a free premium, of \$1.00 credit on any order you may wish to give us. Only those who have a perpetual interest in new fruits are solicited. One of the main reasons for becoming a member is that each member receives a list of the stock as issued and consequently has an opportunity of placing an early order. Again he is notified as to time of meetings, contemplated changes in by-laws etc. The annual meeting which is always held at Geneva on the third Thursday of September has become an important occasion. Many members come from long distances to exchange opinions, to examine and test new fruits, and to listen to discourses on the behavior of the various fruits as grown under varied conditions.

The breeding and testing of fruit is an important but a slow and expensive work. The Association has already done a great service in determining the merit of many new fruits. Unfortunately a few take it for granted that all the introductions have commercial possibilities. Such an attitude naturally defeats the purpose of this organization. Over and over again we must emphasize the fact that these new kinds are simply worthy of trial. A brief description is given so as to present the characteristics expressed at Geneva but the varieties may perform better or worse when grown under a different environment. Progress reports are not required, but they are always appreciated. The Association is always pleased to hear from its members.

The Fruit Testing Association like all other organizations is dependent

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upon the support of its members. This Association is also dependent upon a supply of new and promising new fruits. We wish to call your attention to the fact that the New York State Agricultural Experiment Station has thousands of seedlings of various fruits either fruiting or coming into bearing. Many of these seedlings have already been selected for propagation and distribution and therefore we can assure the members that they can look forward to many promising new fruits in the near future.

In addition to the seedlings on the breeding grounds, there are many chance seedlings growing throughout the country. Some of these seedlings may have possibilities and the best should be studied critically. The Fruit Testing Association requests that such fruits be either sent in or brought in for examination. If the seedlings are worthy of trial the Experiment Station will be pleased to try them out in their test plats.

NEW INTRODUCTIONS

The evaluation of a new fruit requires extensive testing under varied soil and climatic conditions. These new kinds under number have shown promise at Geneva but they may have little or no merit in some other locality. Numbered kinds are not to be distributed or exploited until named. Reports on their performance under your conditions are solicited, for by pooling our information the sooner we can decide whether the fruit is worthy of naming and general distribution.

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APPLES

Apple varieties, due to their long life and slowness in coming into production are much more stable than the small fruits. Nevertheless, if centuries are used as the yardstick, many changes can be noted. The demands of the public likewise change and must be given due consideration. In order to meet these changes new varieties are continually needed. Just at present our greatest need is for a productive, late red apple of good quality that not only equals the desirable characters of the Baldwin but is superior in quality and free from bitter-pit.

To date no such apple is known. However, we have varieties, such as the Macoun and Cortland that are gradually increasing in importance and at the present time the latter can be rated as one of New York's leading varieties.

Unfortunately the performance and suitability of a variety for a particular area cannot be determined except by growing it. The following kinds have been deemed worthy of a trial and an attempt has been made to depict their good characteristics as well as their defects.

The following is a list of apple varieties arranged in order of ripening season from early to late.

SUMMER APPLES		Parentage	Where Orig.	Year Introd.
Close	Unknown		U.S.D.A.	—
Crimson Beauty	"		Canada	—
Alton	E. McIntosh × (Red Canada × Trans.)		N. Y. Sta.	1938
Dunning	McIntosh × Cox Orange		"	1938
Red Van Buren	Said to be Red sport of Duchess		New York	1919
Lodi	Montgomery × Yellow Transparent		N. Y. Sta.	1924
Greendale	McIntosh × Lodi		"	1938
EARLY FALL				
Red Melba	Red sport		Canada	—
Early McIntosh	Yellow Transparent × McIntosh		N. Y. Sta.	1923
Red Gravenstein	Red sport		Wash.	1911
Geneva No. 16884	Lodi × Melba		N. Y. Sta.	1952
Milton	Yellow Transparent × McIntosh		"	1923
Carlton	Montgomery × Red Astrachan		"	1923
Ogden	Zusoff × McIntosh		"	1928
Redhook	McIntosh × Carlton		"	1938
MID-SEASON				
Red McIntosh	Red sport		Canada	—
Sweet McIntosh	Lawver × McIntosh		N. Y. Sta.	1922
Kendall	Zusoff × McIntosh		"	1932
Webster	(Ben Davis × Jonathan) × (B. D. × Jon.)		"	1938
Cortland	Ben Davis × McIntosh		"	1915
Macoun	McIntosh × Jersey Black		"	1923
Haralson	Malinda (open pollinated)		Minn. Sta.	1923
LATE				
Sweet Delicious	Deacon Jones × Delicious		N. Y. Sta.	1922
Medina	" "		"	1922
Newfane	" "		"	1927
Orleans	" "		"	1924

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LATE	Parentage	Where Orig.	Year Introd.
Melrose	Jonathan X Delicious	Ohio	1944
Geneva No. 50-6	Red Spy X Orleans	N. Y. Sta.	1952
Monroe	Jonathan X Rome	"	1949
Idared	Wagner X Jonathan	Idaho	1942
Red Spy	Mr. Green's sport	N. Y.	1923
>Red Rome	Mr. Mill's sport	N. Y.	—

CRAB APPLES

Dolgo	A Russian Crab	S. Dak. Sta.	1916
Young America	Unknown	N. Y.	—

ORNAMENTAL APPLES

Redfield	Wolf River X M. niedzwetzkyana	N. Y. Sta.	1938
Redford	" "	"	1938
Van Eseltine	M. arnoldiana X M. spectabilis	"	1937
Geneva No. 50-4	Malus Zumi X N. Y. No. 11932	"	1952

Alton—is a promising, medium-sized, red apple ripening early in August ahead of Early McIntosh and just after Crimson Beauty. Its chief claim for consideration is that the flavor is sufficiently mild and aromatic that the fruits can be eaten with relish and they possess enough acidity to be good cookers as well. Sorts like Crimson Beauty are too tart for dessert. The apples ripen over a fairly long season and for this reason are especially valuable for the roadside market. The trees are not always reliable croppers.

Carlton—ripens one month later than Red Astrachan which it resembles. It is large, round-conic, and an attractive dark red. The flesh is white, tender, juicy, subacid, and of Astrachan flavor. The tree is vigorous and bears annually. Carlton is recommended for culinary uses. This variety evidently succeeds in the warm areas, as it is now on the Mississippi recommended list.

Cortland—is the leading commercial variety sent out by the Association and its popularity increases as the public becomes acquainted with its good qualities. Cortland now ranks third among the commercial varieties of New York. Its tree is medium in size, productive and an annual and early bearer. The fruit hangs better to the trees than that of its McIntosh parent. In common storage it keeps much better. The apples are large, oblate, well colored with blush and stripes and have a crisp, white-flesh that does not discolor when exposed to the air. The flesh has a pleasing sprightliness that makes it desirable for dessert, salads and culinary uses. Cortland is subject to aphid and scab injury. For best keeping quality, fruits must be harvested while hard-ripe.

Close—was named in honor of the late C. P. Close, a former horticulturist at the Geneva Station and later, for many years, a federal pomologist, who was interested in the improvement of the apple thru breeding. The tree is a vigorous grower and annually productive. The fruit is large, round-oblong conic, of the shape and appearance of Williams. It is well colored with a rather dark dull solid red. The season is as early as Crimson Beauty and a few of the apples ripen ahead of that variety. The quality is

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good but like Crimson Beauty the flavor is decidedly acid. It is primarily an apple for the roadside trade and requires spot picking over a short season.

Crimson Beauty—a very early red apple from New Brunswick. Tree is hardy, productive and an annual bearer. Fruit is large, slightly flattened, sprightly and fair in quality. Like all early varieties, fruit drops easily and therefore trees should be spot picked. Desirable for roadside markets and home use.

✓ **Dunning**—is the earliest ripening good red sweet apple. It ripens early in August with or just after Sweet Bough and requires two or even three pickings. It is a very handsome red striped apple of medium size and excellent quality. Should prove of merit to those who desire an early sweet, attractive apple.

✓ **Early McIntosh**—resembles McIntosh in appearance but is less aromatic and more sprightly. Its tree is vigorous and productive. One of its major faults is that it sets too heavy a crop on alternate years. Severe thinning is requisite to obtain a good commercial size. Early McIntosh ripens about one week after Melba and about with the Duchess. Its main value is for the home and local markets.

✓ **Greendale**—its name suggests green color and it is handsome green in color like its parent, Lodi, while it is shaped like its other parent, McIntosh. The combination of these two characters has resulted in an attractive, trimly shaped, green apple. Its quality, too, is as good as its appearance—excellent for both eating and cooking. To extend the season of Lodi this sort is unsurpassed for a roadside trade which desires a good green apple late in August.

✓ **Haralson**—a Minnesota production, is a hardy, productive, red, culinary apple that keeps well in storage. Recommended for trial, where hardiness is requisite.

✓ **Idared**—originated at the Idaho Agricultural Experiment Station from a cross between Wagner and Jonathan. It is a handsome solid red apple of good quality, maturing about ten days after McIntosh. At Geneva, Idared has performed very satisfactorily and shows real promise as a late keeping dessert or general purpose apple.

✓ **Kendall**—is handsomely colored over the entire surface with dark red, covered with a thick bloom. Its season is about that of McIntosh. The apples are large, trim in outline, and when properly ripened, possess the whitish, fine-grained flesh of McIntosh. The flavor is more sprightly than that of McIntosh. Skin is often slightly russetted which induces shrivelling in storages, low in humidity. Main value is for roadside and curb markets. Advisable to dispose of fruit by the end of winter holidays.

✓ **Lodi**—has rapidly become a commercial apple in those areas that grow early yellow-colored apples, such as the Yellow Transparent. Its fruits ripen a few days later than Yellow Transparent but they are larger and stand up better in shipping. Further, the tree is less prone to biennial bearing.

✓ **Macoun**—is liked by many due to its crisp, white flesh and pleasing flavor. It holds up better in storage than its McIntosh parent. Tree is upright until opened up by a heavy crop and is slower in coming into bearing than McIntosh.

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Requires thinning, otherwise fruits may be smaller than desired. Early thinning likewise induces a more even bearing. Macoun is in favor for dessert purposes.

→ **Medina**—is an apple of the Delicious type and prolongs the season of that variety. The fruits compared with Delicious average larger, keep better in storage, and have more sprightliness and less aroma. Worthy of trial where a late-keeping culinary apple is desired.

→ **Red Melba**—is a color sport of Melba from Canada. The fruit is solid red striped with bright red over pale waxy yellow—an attractive color combination.

It is of good size, mildly and pleasantly flavored and highly aromatic. The season is ahead of and shorter than that of Early McIntosh, averaging about two pickings. The apples are very tender and bruise easily but are well adapted for the roadside stand and the home. Where Melba colors poorly, this red sport should be tried.

→ **Melrose**—is a new variety from the Ohio Experiment Station, Wooster, Ohio which has performed well at Geneva. It resulted from a cross between Jonathan and Delicious and the fruits resemble Jonathan except they are not quite so highly colored and are somewhat more oblate. Melrose is a late keeping high quality dessert apple and is worth a trial planting where an apple of this type and season is wanted.

→ **Milton**—is a handsome apple of Wealthy season and sells readily on roadside markets. Its resistance to rust is an important factor in the Hudson River Valley. The tree is hardy, vigorous and an annual bearer. The fruits are pinkish red with a heavy bloom. The flesh is white, tender, crisp, juicy, and of McIntosh flavor but more sprightly.

→ **Monroe**—named and introduced for trial in 1949. Tree upright-spreading, vigorous and an annual bearer. Fruit large, roundish-conic; color similar to Jonathan, its maternal parent. Flesh yellowish, crisp, juicy and mildly subacid; quality good. Winter apple that offers possibilities for dessert and culinary uses.

→ **Newfane**—produces large-sized fruit of a very attractive red color. The shape is oblong-conic and the flesh tender, medium juicy, mildly flavored with a pronounced Delicious aroma. Newfane is a delicious dessert apple at Christmas time.

→ **Ogden**—is a delicious sweet apple which ripens a little before McIntosh. The apple is large, roundish oblate, handsomely colored with dark solid red and heavy bloom like that of its McIntosh parent. The white flesh is often stained with red and, altho a little coarse, is tender and juicy with an aromatic sweetness which makes the sort especially desirable for baking. The tree is hardy and productive and requires thinning.

→ **Orleans**—is of the Delicious type, but the fruits are more highly colored and run larger. Like its sister Medina, its flavor is more sprightly than that of Delicious and the russetting of the skin induces wilting unless stored under

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good conditions. To date this variety is still on trial. Tree bears early, annually and heavily, and is resistant to scab.

✓ **Red Gravenstein**—differs from the old Gravenstein in the solid, dark red fruits, the parent fruit being light red and much striped with yellow and green. All of the Gravensteins are most excellent autumn apples, but the new one is so much superior in appearance to any of its kin that in the future its culture alone should be recommended.

✓ **Red Spy**—is similar to the Spy, except in color. The color is a solid bright red without either stripes or splashes. Red Spy, with its beautiful fruits, should give new life to the Spy type of apple. It is particularly recommended where a more highly colored Spy is desired.

✓ **Red Van Buren**—according to H. L. Van Buren of Valatie, N. Y., this apple is a red sport of Duchess and was found in his father's orchard at Stockport. Fruit resembles the Duchess, except that the red is solid and ripens slightly later. It also differs in a few minor characters and unlike other red sports pollinates successfully its parent. Desirable for roadside and local markets.

✓ **Redhook**—so named because of its very handsome dark red color and heavy bloom, attractive color being an outstanding characteristic. Sometimes the flesh of the apples is decidedly red. The fruit averages about as large as McIntosh and ripens between Milton and McIntosh. It is sprightly in flavor but highly aromatic—an excellent dessert apple for the home and roadside market.

✓ **Sweet Delicious**—fruits are flatter than those of Delicious—large and attractive in size, color, and shape, with the sweet aromatic flavor of Delicious. The variety is an apple for home use where it will be chiefly appreciated for dessert and baking. Sweet Delicious is our best winter sweet variety.

✓ **Sweet McIntosh**—suggests McIntosh in season, appearance, flavor, and aroma, but is sweet instead of subacid. The variety is primarily adapted for home use—for baking and to eat out of hand.

✓ **Webster**—A large handsome red streaked apple which should become a valuable processing variety. In preliminary processing tests, Webster has rated very high and this quality coupled with its early ripening period gives the northeastern growers a variety to compete with the southern grown York Imperials. Webster produces heavy crops and is in season from October 1st to December 15th. As it is a triploid and produces poor pollen, provisions must be made to insure ample pollination.

✓ **Geneva #50-6**—A large, round-conic apple with a yellow ground color, splashed and striped with red. It is very firm, yellow fleshed, acid, crisp and juicy. It appears to be very productive and has promise as a late processing apple. Processors and growers who have seen this apple are very enthusiastic over its possibilities.

✓ **Geneva #16884**—Medium to large oblong conic apple with very attractive pinkish-red streaking on yellowish green ground color and covered with a heavy, attractive white bloom. The flesh is crisp, white, juicy, slightly acid and of

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good quality. The season is August to September. This apple should have place as an early general purpose apple.

CRAB APPLES

- ~ **Dolgo**—is a small, oblong, handsome red crab apple imported from Russia in 1897 by the late Professor N. E. Hansen of the South Dakota Experiment Station. The fruit is full of juice, jellies easily, and makes a rich, ruby-red jelly of beautiful color and excellent flavor. The tree is hardy, vigorous, and productive; the season early September.
- ~ **Young America**—produces abundantly, attractive red fruits of excellent size and quality. Jelly made from the fruit is a clear, beautiful red and splendidly flavored. The tree is especially vigorous and hardy. The season is about the middle of September. Young America and Dolgo should be planted as ornamentals as well as for their fruit.

ORNAMENTAL APPLES

- ~ **Redfield**—an apple for the lawn and other ornamental plantings because of its large and very dark pink flowers. The fruit is medium in size, dark deep solid red in color, with deep red flesh. The foliage is dark with a reddish green tinge early in the season. This and Redford are two very desirable ornamentals.
- ~ **Redford**—a sister of Redfield and similar in all characters of tree and fruit. The petals are deep pink but not as dark as those of Redfield. The fruit is medium in size, deep dark solid red, with deep red flesh. The foliage has a characteristic reddish green tinge early in the season. Lovers of handsome ornamental apples will plant this sort and Redfield.
- ~ **Van Eseltine**—a beautiful ornamental crab named in honor of the late originator. Buds pendulous and red, while open flowers are semi-double and pinkish white.
- ~ **Geneva #50-4**—This is a beautiful red flowered and red leaved crab apple. It was selected as an ornamental.

▽ DWARF APPLES

Where space is limited it might be desirable to plant trees on a size controlling root system. The advantages of size controlling rootstocks are a smaller and earlier bearing tree. Experimentation with some of the dwarfing and semi-dwarfing apple rootstocks of the East Malling series, as E.M. IX and E.M. VII, has shown that the varieties listed can be grown satisfactorily on these stocks.

Malling IX

Lodi	Macoun
Red Gravenstein	Milton
Red Spy	Cox Orange
Early McIntosh	

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Malling VII

Cortland	Macoun
Monroe	Lodi
Webster	R. Melba

The E.M. IX rootstock gives a typical dwarf tree that starts bearing the second or third year after planting. Since the root system of E.M. IX is brittle it is recommended that trees on this stock be either supported by a stake or a trellis.

The E.M. VII rootstock limits growth of the variety to a lesser degree but still hastens bearing. Trees on this stock can be grown without any special support and will reach a size one-third that of a standard tree.

CHERRIES

As all of the sweet cherry varieties are self-unfruitful, it is necessary to have a compatible variety near by. Fortunately we do not know of any incompatible varieties in the following list.

EARLY CHERRIES	Parentage	Where Orig.	Year Introd.
Seneca	Unknown X Early Purple	N. Y. Sta.	1924
Geneva No. 1495	Emperor Francis X Gil Peck	"	1953
Early Rivers	Early Purple (open pollinated)	European	1872
Schrecken	Unknown	"	—
Bigarreau			
MID-SEASON			
Sodus	Napoleon X Giant	N. Y. Sta.	1938
Victor	Windsor (open pollinated)	Canada	1925
Royal Duke	Unknown	European	—
Noir de Guben	"	"	—
Emperor Francis	"	"	—
Bing	Republican (open pollinated)	Oreg.	1899
Geneva 1507	Schmidt X Bing	N. Y. Sta.	1952
Vernon	Windsor (open pollinated)	Canada	1937
Geneva 1512	Schmidt X Lambert	N. Y. Sta.	1952
Gil Peck	Napoleon X Giant	"	1936
Giant	Unknown	Burbank	1914
Geneva 1519	Schmidt X Lambert	N. Y. Sta.	1952
LATE			
Giant d'Hezel- fingen	Unknown	European	—
Velvet	Windsor (open pollinated)	Canada	1937
Noble	Unknown	European	—
Geneva 591	Oswego X Giant	N. Y. Sta.	1952

▲ Early Rivers—is an old English variety that is widely grown in Europe. The tree is vigorous and productive. Its medium sized, crimson-black cherries are excellent in quality with firmer flesh than most early cherries. Early Rivers ripens a week to 10 days earlier than Black Tartarian. Plant Early Rivers to succeed Seneca.

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- ↘ **Emperor Francis**—is a large, high-quality cherry of the Napoleon type. The cherries have been less subject to cracking than those of Napoleon. The color of the two fruits is similar, except that those of Emperor Francis are a little redder and become darker. All in all, Emperor Francis promises to be one of the best main-crop sweet cherries.
- **Giant**—was introduced by Luther Burbank in 1914. The tree is large, vigorous, and very productive. The cherries are attractive in size and color; the crop is late, coming in season just before Lambert. The quality is splendid and the cherries are less subject to cracking than the Bing. Giant is one of Burbank's most notable productions.
- ↘ **Hedelfingen**—ripens just ahead of Windsor and Lambert. Its performance in New York, Canada and Europe justifies its being recommended as a large, firm-fleshed, high-quality, late black cherry of the Lambert type. The fruit has the valuable attribute of being more resistant to cracking than most cherries.
- **Gil Peck**—was named in honor of the late Professor Gilbert W. Peck of Cornell at the request of the Indians of the Six Nations by whom Professor Peck was greatly beloved. The fruit is large, dark purplish black, similar in shape to Giant and as good in quality. It is firm fleshed, juicy, sweet and richly flavored. The season is late. Well worthy of a trial for home and commercial purposes.
- ↘ **Noble** (syn. Tradescant Heart, St. Margaret)—is a late dark-colored firm-fleshed sweet cherry for market and home use. Its season of ripening is between Schmidt and Hedelfingen. The fruit is large, heart-shaped, slightly flattened at the apex, dark purplish red, firm-fleshed, and of high quality. The fruits seem to crack less than those of several of the late sweet cherries. It is an old English variety greatly esteemed in England and deserving a trial in the United States.
- **Noir de Guben**—long grown and esteemed in Europe and England but it seems never to have been disseminated in America. It is a reddish black cherry of good size unless it crops too abundantly when the size is not satisfactory. The flesh is firm, juicy, very sweet and aromatic. It is a cherry of the type of Schmidt and a little earlier in season. The tree is a vigorous, thrifty grower, healthy, and productive.
- **Royal Duke**—has long been grown in Europe to follow May Duke. The trees are hardy, healthy, and productive. The cherries are large, handsome, dark red, well scattered along the branches, pleasantly flavored, refreshing, and very good in quality. Royal Duke has a place in home orchards for roadside and local markets.
- **Schrecken Bigarreau**—resembles Early Rivers but is a little later in season and has a longer stem and a more oval stone. It is a large heart-shaped, glossy black cherry, handsome in appearance. The flesh is melting but firmer than the early-ripening sweets, moderately sweet, and full of aro-

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matic dark-colored juice. The season approximates that of Black Tartarian but the larger size of the fruit and the firmer flesh make the variety much more valuable than Black Tartarian. The tree is vigorous and productive.

- ↖ **Seneca**—is a remarkably early cherry, being more than 2 weeks earlier than Black Tartarian. Its main difficulty is that unless protected by an open-meshed cloth the fruit may be destroyed by birds. The cherries resemble those of Black Tartarian in being round-cordate, purple-black, with juicy, melting flesh, and a rich, sweet flavor. The pit is free and the skin does not crack. The tree is very vigorous, productive, and has an upright-spreading growth.
- ↖ **Sodus**—is a light-colored, firm-fleshed sweet cherry that ripens just ahead of the Victor. May crack during rainy seasons. Worthy of trial for maraschino use.
- ↖ **Victor**—originated in 1916 at the Horticultural Experiment Station at Vineland, Ontario. The fruit resembles that of Napoleon and ripens midway between Governor Wood and Napoleon. The cherries are large, medium firm-fleshed, light-colored and excellent quality. The tree is large, vigorous and productive.
- ↖ **Victor** is a splendid new sweet cherry which everybody will like.
- ↖ **Velvet**—is an introduction of the Horticultural Experiment Station at Vineland, Canada. It is a seedling of Windsor, a productive, firm fleshed black cherry, ripening with Hedelfingen. The quality is good. Further testing is required to determine whether this variety or Hedelfingen is the better.
- ↖ **Vernon**—originated at the Horticultural Experiment Station at Vineland, Ontario, as "An open-fertilized seedling of Windsor. Fruit large, firm-fleshed, same color as Windsor. Tree vigorous, productive; season of Windsor". Has proved promising in New York.
- ↖ **Geneva #1495**—is thought to have been obtained from the cross — Emperor Francis x Gil Peck. It is a large firm fleshed black cherry, which ripens before Early Rivers. It is the earliest firm-fleshed type, being more than a week earlier than Schrecken Bigarreau. The quality is very good, being the best in it's season.
- ↖ **Geneva #1507**—is a productive tree ripening about Schmidt season. The fruit is medium to large, attractive and black in color. The flesh is sweet, firm and crisp and the quality is very good.
- ↖ **Geneva #1512**—A very large, attractive dark mahogany colored cherry. The flesh is firm crisp and juicy with a sweet and sprightly flavor which is very good. Probably more susceptible to brown rot and cracking than Schmidt with which it ripens.
- ↖ **Geneva #1519**—A productive cherry ripening a few days later than Schmidt. The fruit is large and very dark in color. The flesh is firm, crisp, juicy, sweet and of good quality. This cherry appears to be more resistant to cracking than most varieties.

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→ **Geneva #591**—The best sweet cherry to follow Lambert. It is a medium sized black cherry with a flesh which is slightly tough until it is dead ripe. The flavor is sweet and good.

NECTARINES

Nectarines, like the plum, are more subject to curculio injury than the peach and consequently require careful spraying. More attention should be given to the breeding of this fine-flavored fruit as it is deserving of greater popularity.

	Parentage	Where Orig.	Year Introd.
Geneva No. 884	Big Boy × Schumaker (selfed)	N. Y. Sta.	1951
Rivers Orange	Unknown	European	—
Hunter	Elberta? (open pollinated)	N. Y.	1930
Sure Crop	Unknown	New Zealand	—

→ **Hunter**—is said to have come from an Elberta pit. Grown by Harry Hunter, White Plains, N. Y. The tree is vigorous and productive. The fruit is large, round, yellow with a heavy blush. The flesh is free from the stone, with the true nectarine flavor, although somewhat tart. It ripens in midseason.

→ **Rivers Orange**—is a yellow-fleshed nectarine which ripens in early mid-season. The fruit is a freestone nearly covered with a dark red blush. No nectarine has a richer, sweeter flavor. This is one of the choicely good European sorts.

→ **Sure Crop**—was imported from New Zealand by the U. S. Department of Agriculture. The tree is vigorous and productive. The fruits are large, roundish, white and overlaid with very attractive red. The flesh is firm, tender, free from the stone, and very pleasing in flavor; late midseason.

→ **Geneva 884 Nectarine**—is a seedling of an unnamed seedling (Big Boy × Schumaker) selfed. It is our earliest nectarine and ripens with Mikado. Its fruit is medium, white-fleshed and a clingstone. It is recommended for trial due to its high quality, hardiness and freedom from brown rot.

PEACHES

New peach varieties are being introduced so rapidly that it is confusing to the grower to know just what kinds to plant. He must first know his market or outlet. If he is interested in a succession thruout the season, varieties are now available for such a purpose. The Association is propagating some of the more promising new kinds and these will be released from time to time. If possible a grower should have a small test orchard to determine the kinds best suited to his conditions.

VERY EARLY	Parentage	Where Orig.	Year Introd.
Earlyvee	Golden Jubilee (open pollinated)	Canada	1949
Prairie Dawn	Valiant × Halehaven	Ill. Sta.	about
Mikado	Unknown	Texas	1946
Marigold	Lola × Arp	N. J. Sta.	1913
Dixigem	(Dewey × St. John) × South Haven	U.S.D.A.	1925
			1944

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	Parentage	Where	Year
		Orig.	Introd.
EARLY			
Oriole	Slappey \times Dewey	N. J. Sta.	1924
Raritan Rose	J. H. Hale \times Cumberland	“	1939
Jerseyland	104325 [J. H. Hale \times (Slappey \times Dewey)]. N. J. Sta. (open pollinated)	N. J. Sta.	1946
Redhaven	Halehaven \times Kalhaven	Mich. Sta.	1940
MID-SEASON			
Triogem	J. H. Hale \times Marigold	N. J. Sta.	1938
Delicious	Belle \times Greensboro	“	1925
Southland	Halehaven (selfed)	U.S.D.A.	1946
Sunhigh	J. H. Hale \times (Carman \times Slappey)	N. J. Sta.	1938
Redrose	J. H. Hale \times Delicious	“	—
Vedette	Elberta (open pollinated)	Canada	1923
Halehaven	J. H. Hale \times South Haven	Mich. Sta.	1932
Valiant	Elberta (open pollinated)	Canada	1925
Veteran	Vaughan \times Stark Early Elberta	“	1928
LATE			
Afterglow	J. H. Hale \times 27116 (Slappey \times Dewey)	N. J. Sta.	1938

▲ **Dixigem**—is an introduction of the U.S.D.A. at Fort Valley, Ga., obtained from the cross between (Dewey \times St. John) and South Haven. It is a yellow-fleshed freestone of good quality which ripens about the middle of August at Geneva or just ahead of Redhaven. It is less hardy than Redhaven.

▲ **Halehaven**—was introduced by Michigan Agriculture Experiment Station in 1932. Matures about two weeks before Elberta or in Valiant season. It is very attractive, large and of good quality. The tree is vigorous, productive and hardy.

▲ **Mikado**—The tree is medium in size and vigor and is productive. The fruit ripens the first week of August, is medium in size, round in shape, semi-cling, and attractive yellow blushed with red. The quality is good. Mikado is pollen-sterile and therefore requires cross-pollination.

▲ **Prairie Dawn**—is an Illinois station seedling obtained from Valiant crossed with Halehaven. It is an early yellow-fleshed, clingstone of fair quality and a rather coarse, soft flesh when dead ripe. It is one of the hardest yellow-fleshed varieties and ripens 10 days before Redhaven.

▲ **Redhaven**—Was introduced by the Michigan Agricultural Experiment Station in 1940. It is a highly-colored, yellow-fleshed, freestone peach ripening a few days before Golden Jubilee or about with Oriole. It has good fruit quality and its flesh is very firm for an early peach. The trees set heavy crops and require thorough thinning or undersized fruit may result.

▲ **Southland**—is a U.S.D.A. introduction from Fort Valley, Ga., derived from Halehaven selfed. A yellow, firm-fleshed, freestone peach that ripens with Halehaven. Recommended for the South. (Has not fruited at Geneva Station.)

The following varieties are introductions of merit from the New Jersey Experiment Station:

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- ↖ **Afterglow**—is a seedling of J. H. Hale \times 27116 (Slaphey \times Dewey) from the New Jersey Station. It is a large yellow-fleshed freestone which ripens a few days later than Elberta. It is a high quality peach which looks promising to extend the peach season.
- ↖ **Delicious**—is a white-fleshed seedling of Belle. The tree is vigorous and productive. Fruit is of the Belle type, medium to large in size and very attractive; flesh medium firm, good or above in quality, and free from the stone. Delicious is in season just ahead of Carman and surpasses that variety in appearance and quality.
- ↖ **Jerseyland**—is a seedling of 104325 [J. H. Hale \times (Slaphey \times Dewey)] open pollinated from the New Jersey Station. It ripens about one week ahead of Golden Jubilee. The fruit is very dark red, yellow-fleshed and firm for an early peach. Reported as a freestone in New Jersey but clings at Geneva unless dead ripe. As hardy in bud as Redhaven and about the same season.
- ↖ **Marigold**—is an early peach that has filled a niche between the Mikado and Oriole. In shape, color, and flavor it resembles Arp, but while Arp is very stringy in texture and a strong cling, Marigold is a semi-cling with tender flesh.
- ↖ **Oriole**—is in season about a week after Marigold and a week ahead of Golden Jubilee. The tree is vigorous and productive. The fruit is medium to large in size, roundish, yellow, very good in quality, and a freestone. Its flesh has a greenish tinge that impairs its appearance. Oriole is notable as an early peach of high quality.
- ↖ **Raritan Rose**—is a white-fleshed freestone peach obtained by crossing J. H. Hale with Cumberland. The fruit is large and round-oval in shape. It is well washed with red color and attractive. The flesh is of good quality and considerably firmer than that of Cumberland which it is designed to replace. It ripens a few days before Golden Jubilee.
- ↖ **Redrose**—is another white-fleshed peach and was obtained by crossing J. H. Hale with Delicious. The fruit, which ripens about ten days after Raritan Rose or just before Halehaven, is of good size, highly colored and of firm texture. Its quality is far superior to other white-fleshed peaches ripening in its season or earlier.
- ↖ **Sunhigh**—is a seedling of J. H. Hale crossed with a seedling of Carman by Slaphey. It is a large, highly-colored, bright, firm, smooth peach which ripens a few days before Halehaven. It is a freestone with attractive yellow flesh and its quality ranks among the best of the new peaches recommended for trial in New York.
- ↖ **Triogem**—was produced by crossing J. H. Hale with Marigold. It is a yellow freestone peach, oval in shape and ripens about two days after Golden Jubilee or three weeks before Elberta. The fruit is highly colored, has short pubescence and is very attractive. The flesh is firm and the variety stands handling much better than Golden Jubilee in addition to having much better quality. The trees are productive and require thorough thinning.

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The four varieties of peaches described below originated at the Horticultural Experiment Station, Vineland, Ontario, Canada.

- ✓ **Earlyvee**—is a very early yellow-fleshed peach from the Vineland Station, obtained from a seed of an open-pollinated Golden Jubilee. It ripens about a week earlier than Mikado and is a freestone when dead ripe. The quality is good for such an early peach. Its main fault is that its skin is very tender and requires careful handling.
- ✓ **Valiant**—is a seedling of Elberta. The fruit is large, roundish oblate, yellow blushed with red, with firm juicy flesh of very good quality; a freestone. The trees are productive. It is in season by the first of September or about two weeks ahead of Elberta. Noteworthy because of earliness and rich delectable flavor.
- ✓ **Vedette**—one of the first Canadian varieties introduced, ripens a few days before Valiant. Like Valiant it was obtained from an Elberta seed. The tree is productive and the fruit is large, roundish oval, yellow fleshed, and a freestone. It ripens 3 weeks before Elberta and is superior to its parent not only in quality but in color as well.
- ✓ **Veteran**—originated in 1919 as a cross between Vaughan and Early Elberta. The fruit is large, round, yellow fleshed, usually a freestone, and far superior to Elberta in quality. Since it ripens a few days later than Valiant, it makes a desirable sort to follow that variety. Hardy in bud.

APRICOTS

It is recommended that at least two varieties be planted closely in order to induce better fruitfulness.

		Parentage	Where Orig.	Year Introd.
Doty	Unknown		N. Y.	1944
Geneva No. 346	(seedling of Doty \times Geneva) open pollinated		N. Y. Sta.	1953
Henderson	Unknown		"	1935
Geneva	"		"	1934

- ✓ **Doty**—Named for Mr. Doty, formerly of Oaks Corners, N. Y. as the original tree grew on his place. Tree is very large, vigorous, hardy and productive. Fruit is medium in size, attractive, light golden yellow with few reddish markings, juicy, sweet, nearly free from fibre and very good in quality. Excellent for home and local markets.
- ✓ **Geneva**—Was grown from seed collected near Frascati, Italy. Sent out by U.S.D.A. as No. 34265. Fruit large, roundish, compressed, slightly pointed, yellow with a blush and dots; flesh yellow, fine-grained, firm, sweet, very good and free from the stone. Excellent reports have been received in regard to its productiveness and merit.
- ✓ **Henderson**—tree strong, vigorous grower and productive; fruit large, roundish, yellow and blushed; flesh yellow, slightly fibrous, sweet, good in qual-

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ity, and free from stone. Owing to size and flavor, it is deemed worthy of trial. Originated by the late Geo. W. Henderson of Geneva, New York.

Geneva #346—is a seedling obtained from an open-pollinated seedling of Doty x Geneva. This seedling first fruited in 1949 and has borne large crops regularly since then, except in 1950 when even the hardiest apricots did not fruit at Geneva. The fruit is large and attractive. The flesh is very good quality, free from the pit and free from fiber. It ripens about 10 days after Doty.

PEARS

The New York State Agricultural Experiment Station is trying to breed pears less susceptible to blight than sorts now grown. Seckel, being fairly free from blight and with splendid tree and fruit characters, and the Bartlett, the leading pear, have been used extensively as parents.

The Association is listing the following varieties in order of ripening season from early to late.

EARLY PEARS		Parentage	Where Orig.	Year Introd.
Chapin		Seckel (open pollinated)	N. Y. Sta.	1946
Early Seckel		" "	"	1935
Geneva No. 7620	Bartlett	× Marguerite Marillat		1952
Caywood		Seckel (open pollinated)	"	1938
MID-SEASON				
Geneva No. 4885	Bartlett	× Ewart	N. Y. Sta.	1952
Gorham	Bartlett	× Josephine deMalines	"	1923
Clyde	Seckel	(open pollinated)		1932
Ewart	Unknown		Ohio	1917
Pulteney	W. Nelis	× Russet Bartlett	N. Y. Sta.	1925
Cayuga		Seckel (open pollinated)	"	1920
LATE				
Waite	Keiffer	× Bartlett	U.S.D.A.	1937
Covert	Bartlett	× Dorset	"	1935
Dana Hovey	Unknown		Mass.	1854
Ovid	Bartlett	× Dorset	N. Y. Sta.	1931
Willard	Bartlett	× Dorset	"	1931
Beurre Dumont	Unknown		European	—
Alexander Lucas	"		France	—

~ **Alexander Lucas**—an attractive French winter pear of good quality that has never been widely disseminated. Fruit large, round-conic, yellow with a blush; flesh yellowish-white, fine, melting, juicy and aromatic. Desirable for dessert and culinary uses. Season November to January.

~ **Beurré Dumont**—known for more than a century in Europe and England but like some other choicely good European fruits it seems never to have been disseminated in America. The fruit is medium in size, altho often as large as Bartlett, round-conic, tapering to a short neck. It is greenish yellow, well covered with cinnamon brown, the russet being smooth and fine. The tree is moderate in growth and vigor and is productive. For a dessert pear

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in early winter this variety has few equals. The flavor is delectably sweet with a most delicious perfume—one of the best in quality.

- ✓ **Cayuga**—averages as large as Bartlett, but in shape and color is similar to Seckel. The flesh is firm and fine in texture quite to the center, and possesses a delectable flavor. The tree grows tall and is slow in coming into bearing. May be advisable to head trees back.
- ✓ **Caywood**—resembles its Seckel parent in general characteristics, altho it is larger, rounder in shape, and considerably more russeted. Its claim for merit is in its splendid sweet highly aromatic Seckel flavor and the fine smooth light russet finish of the fruit. Its season is a little after Early Seckel.
- ✓ **Chapin**—is another seedling of Seckel that resembles its parent somewhat in general characteristics. The fruit is small and obovate in shape. Its color is similar to that of Cayuga but less russeted than Seckel. The flavor is very sweet, richly aromatic and excellent in quality. Ripens just ahead of Early Seckel and nearly a month before Seckel; its season is short.
- ✓ **Clyde**—is also an open-pollinated seedling of Seckel, and resembles its parent in tree and fruit characters. Fruit larger than Seckel, similar in shape but longer and less obovate, of about the same color but lighter; flesh tender, juicy, and buttery, with the Seckel flavor but not quite as rich or spicy; ripens two or three weeks later than Seckel and keeps much longer. Tree similar to Seckel in all respects.
- ✓ **Covert**—is one of the largest of all cultivated pears. It resembles Bartlett in shape with the same roughened surface and has about the same green color which mellows into a clear Bartlett yellow when fully mature. The fruit is two months later than Bartlett, very firm, and handles unusually well. Canning tests indicate that the canned product is almost if not quite equal to Bartlett and much better than Kieffer. The tree is a prodigious cropper. Covert bids fair to replace Kieffer for canning and for export.
- ✓ **Dana Hovey**—an old variety of delicious quality that should be grown in every pear-lover's orchard. Unfortunately it is no longer propagated and therefore a few trees have been grown for members. Fruit is about the size of Seckel and is equally rich in quality. It ripens in December when many of the high-quality pears have gone.
- ✓ **Early Seckel**—is exactly what its name implies—an early-ripening Seckel. The season is from 2 to 3 weeks ahead of Seckel but in cold storage the fruit can be kept longer than Seckel. The variety closely resembles Seckel in appearance and flavor, having the same delectable taste. It is unsurpassed for local and roadside markets.
- ✓ **Ewart**—comes from Mortimer Ewart, East Akron, Ohio. The fruit is remarkable for its large size and good quality. It is greenish yellow, netted with russet, and has a fine, melting, tender, juicy flesh. The season is a month later than Bartlett.
- ✓ **Gorham**—ripens its fruit 2 weeks later than Bartlett and keeps a month longer. The fruits resemble those of Bartlett in size, color, and shape. The

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flavor is sweet and vinous with a very marked and pleasing aroma. The flesh is white, tender, buttery, and juicy—a combination which, with the rich flavor and spicy aroma, makes this one of the very best-flavored pears of its season. Recommended for dessert and canning. Trees are not always reliable croppers.

↓ **Ovid**—ripens in December at Geneva. Its fruit is large and in color resembles that of Bartlett, except that it bears russet patches. The flesh is fine-grained, tender, nearly white, sweet, agreeably flavored, and good in quality. Ovid promises to be a splendid late pear.

↓ **Pulteney**—is from the same cross as Phelps and is of the Bartlett type, with fruits a little more regular in outline, skin smoother, but possibly not as attractive in color. It ripens 4 weeks later than Bartlett, hence is valuable to prolong the Bartlett season.

↓ **Waite**—seems to be outstanding as a blight-resistant pear. Under severe test conditions this pear has never developed more than about 10 percent as much blight as Kieffer. The fruit is of the shape and size of Bartlett and ripens with Kieffer. The flesh is smooth without grit cells, juicy, with more of an acid flavor than Bartlett but excellent for cooking and canning and fair for table use. The tree is a rather slender, willowy grower, of moderate vigor. The blossoms produce little or no pollen so cross-pollination is essential. Under favorable pollination conditions it sets well and is a heavy cropper.

↓ **Willard**—ripens about 2 weeks later than Ovid and resembles Bartlett in shape, and with a dull greenish color. The surface is uneven and irregular. Its flesh is yellowish, fine-grained, tender, juicy, with a piquant flavor. Recommended for trial where very late pears can ripen.

↓ **Geneva #4885**—A large productive pear of the Bartlett type that ripens a little later. The flesh is white, fine grained, tender and juicy. The flavor resembles Bartlett but is not quite as good.

↓ **Geneva #7620**—A seedling of Bartlett x Marguerite Marillat and is a high quality summer pear. It is productive and the fruit is of good size. It is an attractive yellow in color overlaid with some light russet. The flesh is fine, melting and juicy with a sweet and aromatic flavor.

↓ DWARF PEARS

Pear trees are dwarfed when grown on a quince root system. The Association is growing a few trees of Early Seckel, Cayuga and Gorham on this dwarfing stock.

JAPANESE PLUMS

The Japanese varieties are mostly early, soft and juicy.

Nearly all Japanese varieties require cross-pollination. At least two different ones should be planted to insure a crop. Formosa has been reported to have pollen of low germinability and should not be selected as a pollinizer.

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		Parentage	Where Orig.	Year Introd.
Methley	Unknown		B.P.I. from So. Africa	—
Beauty	“		Burbank	1911
Formosa	Japanese		“	1907
Santa Rosa	“		“	1906

▲ **Methley**—is an early small fruited plum with reddish purple color and red flesh of fair quality.

▲ **Beauty**—is an early Japanese plum originated by Burbank that precedes Abundance. The fruits are medium in size, roundish conic, medium to dark red, and covered with a lilac bloom; skin thick and tough; flesh yellowish tinged red, very juicy, tender but stringy, subacid to sweet; good; cling-stone. Beauty is a splendid sort to begin the plum season. Tree lacks hardiness.

▲ **Formosa**—is a Japanese plum recommended for its large attractive fruits. The plums are oval to slightly cordate, greenish yellow nearly overlaid with red; flesh firm, juicy, melting, pale yellow, sweet and good; stone slightly clinging; ripens in midseason. Tree is a biennial bearer.

▲ **Santa Rosa**—is one of Burbank's noteworthy Japanese plums which in nearly all characters of tree and fruit surpasses Abundance and Burbank. The tree is a prolific bearer, and the large attractive fruits keep and ship well. Santa Rosa is one of the best Japanese plums on the grounds of the Experiment Station at Geneva.

EUROPEAN PLUMS

The European plums make up the most important group and include the greatest variety of types and the highest quality sorts that we have.

Many European plums require cross-pollination. Even the varieties that are classed as self-fruitful may produce better crops when cross pollination is provided.

EARLY		Parentage	Where Orig.	Year Introd.
California Blue	Peach (open pollinated)		Calif.	1909
DeMontfort	Unknown		European	—
MID-SEASON				
Utility	Jefferson × Peach		Eng. about	1915
Early Transparent	Transparent Gage Seedling		“	1866
Gage				
American Mirabelle	Imperial Epineuse × Mirabelle		N. Y. Sta.	1925
Pearl	Prune d'Agen seedling		Burbank	1898
Yakima	Unknown		Wash.	1922
Green Gage	“		France?	—
Hall	Golden Drop × Grand Duke		N. Y. Sta.	1923
Imperial Epineuse	Unknown		European	—
Stanley	Agen × Grand Duke		N. Y. Sta.	1926

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LATE	Parentage	Where Orig.	Year Introd.
Geneva No. 826	Albion X Italian Prune	N. Y. Sta.	1952
Sannois	European	European	—
Golden Trans. Gage	Transparent Gage seedling	England	1894
Albion	Golden Drop X Grand Duke	N. Y. Sta.	1929
Albion	is the latest ripening good plum grown at Geneva. It belongs to the Grand Duke type, but its fruits are larger and better in quality. The tree is productive, strong, and vigorous. Recommended where a late plum is desired.		
American Mirabelle	is a small, sweet, yellow Damson. The fruits resemble those of the European Mirabelle closely in color, but are much larger. The flavor is delightfully good and the new variety will be appreciated by all lovers of choicely good fruits to eat out of hand or for culinary purposes.		
California Blue	an early-ripening, large, roundish, attractive purple freestone plum. Good in quality, altho slightly tart. Worthy of trial for home and early markets.		
De Montfort	Old French, blue plum that deserves trial by lovers of high-quality fruit. Fruit medium in size, roundish oval, and dark purple; flesh juicy, sweet, rich; freestone. Season late August.		
Early Transparent Gage	A dwarfish, compact tree. Fruit medium, greenish yellow with attractive red dots. Flesh yellow, freestone, very sweet and of the highest Gage flavor. Good for dessert, excellent for jam and for canning and usually a reliable cropper.		
Golden Transparent Gage	A choice, late dessert plum. Fruit is clear golden-yellow with a number of small red dots. Flesh firm, very sweet with rich Gage flavor.		
Green Gage	Considered by Europeans to be the ideal dessert plum. Fruit small, yellowish green of rich flavor but crops are light and uncertain.		
Hall	is a large, attractive, blue plum. The fruits are so attractive and well flavored that they will sell in any market. In color it resembles the Grand Duke. Tree is productive and medium in size. Requires pollinator.		
Imperial Epineuse	is an old French prune. Fruit is reddish purple, tender, sweet, juicy, and highly flavored. Requires cross-pollination.		
Pacific	is a very large, bluish-colored, freestone plum of good quality. Some years its crop is light and during wet seasons it may crack. Size and appearance should command a ready sale.		
Pearl	is a medium-sized yellow plum originated by Luther Burbank. Its quality is exceptionally sweet and rich. Recommended for the home garden. Tree is only moderately productive.		
Sannois	is a very late reddish purple French plum of medium size. It is one of the sweetest and most delectable varieties of all the plum family. Recommended for the home garden.		
Stanley	The fruit is of the prune type, excellent for cooking or eating out of hand. The tree is healthy, vigorous, and produces full crops annually. The		

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fruit is large in size, dark blue with thick bloom; flesh greenish yellow, juicy, fine-grained, tender, firm, sweet, pleasant; quality good; stone free; mid-season. This variety is becoming a valuable commercial variety.

Utility Plum—originated by Thomas Laxton, England, by crossing Jefferson with Peach and introduced about 1915. Fruit large, almost oval, deep cyclamen purple with bloom; flesh tender, juicy, sweet and fair flavor for dessert. Season mid-August.

Yakima—a very large, prune-shaped, purplish red, freestone, good-quality plum. Tree is vigorous and upright. Recommended for local markets.

Geneva #826—Obtained in 1937 from a cross between Albion and Italian Prune. A high quality, self-fruitful, freestone, prune-type plum that ripens at Geneva the last week of September. The fruit is slightly oval, with an attractive blue-black bloom on a dark red under-coat. The light greenish amber flesh is firm and crisp with a sweet and very good flavor. Preliminary observations indicate that this plum may prove to be a valuable late prune-type to follow Stanley.

AMERICAN-JAPANESE HYBRIDS

Native or American types are hardy but cannot compare in quality with other types. Hybrids between Japanese and American plums are superior to our native sorts and are hardy in cold regions. They can be grown where the more tender sorts are winter killed.

	Parentage	Where Orig.	Year Introd.
Redcoat	Abundance X Wolf	Minn. Sta.	1942
Superior	Burbank X Kaga	"	1933?
South Dakota No. 27	Unknown	"	—

Redcoat—The fruit is medium in size, bright crimson with heavy bloom. The flesh is yellow and mildly subacid. The tree is hardy, vigorous, productive and early bearing. The season is early, closely following California Blue.

Superior—Fruit is large conic, dark red with russet dots and with a heavy and rather attractive bloom. The flesh is yellow, juicy with sprightly flavor and slightly acid toward skin. It clings to the pit. The season is late mid-season.

South Dakota—has proven to be an excellent pollinator for the American-Japanese hybrids. The fruits are small to medium size, attractive red over yellow ground. Flesh is yellow and juicy. Season is late mid-season.

GRAPES

The Geneva Experiment Station has introduced over 25 varieties of grapes and most of them have proved of merit either in New York State or other grape-growing areas throughout the United States. Many unnamed seedlings of promise for dessert, wine and juice purposes are now on trial and will be named and introduced as soon as they are considered worthy of a general trial. Some of the most promising seedlings may be found too tender to withstand test winters that oc-

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casionally occur or too susceptible to certain diseases as the mildews and black rot. Reports on the performance of any of the introductions is solicited for it forms the basis of our recommendations.

		Parentage	Where Orig.	Year Introd.
VERY EARLY				
Schuyler		Ontario × Zinfandel	N. Y. Sta.	1947
Interlaken Seedless		Ontario × Thompson Seedless	"	1947
Himrod		" " "	"	1952
Van Buren		Fredonia × Worden	"	1935
Portland		Champion × Lutie	"	1914
Ontario		Winchell × Diamond	"	1908
Seneca		Lignan Blanc × Ontario	"	1930
EARLY				
Athens		Hubbard × Portland	"	1938
Buffalo		Herbert × Watkins	"	1938
Kendaia		Portland × Hubbard	"	1939
Fredonia		Champion × Lucille	"	1927
MID-SEASON				
Eden		Ontario × (Triumph × Mills)	"	1938
Romulus		" × Thompson Seedless	"	1952
Dunkirk		Brighton × Jefferson	"	1920
Westfield		Herbert × Concord Seedless	"	1935
Naples		Delaware × (Mills × Iona)	"	1952
Concord Seedless		Concord sport?	"	
Bath		Fredonia × Sta. 10805 (Chasselas Rose Violet × Mills)	"	1952
Alden		Ontario × Grosse Guillaume	"	1952
Bronx Seedless		(Goff × Iona) × Sultanina	"	1937
Hanover		Brighton × Niagara	"	1927
Steuben		Wayne × Sheridan	"	1947
LATE				
Hector		Chass. Rose × Brocton	"	1937
Seibel No. 1000		French-American Hybrid	France	
Sheridan		Herbert × Worden	N. Y. Sta.	1921
Ruby		Keuka × Ontario	"	1938
Yates		Mills × Ontario	"	1937
Golden Muscat		Muscat Hamburg × Diamond	"	1927
Keuka		Chass. Rose × Mills	"	1923
Urbana		Ross × Mills	"	1912

Alden (Geneva #13035)—An Ontario by Grosse Guillaume cross. Vine vigorous and productive; clusters large, tapering, loose; berries large, oval, reddish black; flesh juicy, meaty, tender, sweet and vinous; quality good. Season end of September. Slight cracking occurred during one wet season. Due to large size, pleasing texture and quality, this grape is deemed well worthy of trial for the home and local markets. Requires short pruning.

Athens—is a promising black grape of the Concord type that ripens about a month earlier. Vine very vigorous, hardy, and very productive; bunches medium to large, loose and tapering; berries larger than the Concord, roundish oval, black with a heavy bloom; skin tender; flesh tough, sweet,

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slightly foxy, good quality. Well worthy of trial as an early black grape of the Concord type.

- ↖ **Bath (Geneva # 18149)**—Obtained from a cross between Fredonia and Sta. #10805 (Chasselas Rose Violet x Mills). Vine vigorous and productive; cluster medium in size and compact; berry medium, round oval, black; flesh tender, juicy, sweet, free from foxiness; quality good; season last week in September. Vines are liable to overbear unless more severely pruned than the Concord.
- ↖ **Buffalo**—is an early black grape ripening first week in September, and is suitable for dessert and wine. Vine is vigorous, slightly tender, but very productive; clusters medium plus, tapering, medium compact; berries medium, roundish oval, adherence strong; flesh juicy, melting, very sweet, slightly foxy, pleasing, good.
- ↖ **Dunkirk**—has bunches and berries similar to those of Delaware, but both are larger, and the crop ripens later and keeps longer. The skin is thin like that of Delaware, of similar color, but is tough enough to make the grape a good shipper. The clusters are unusually uniform in shape and size, compact, and well filled by the berries. The vine is vigorous, hardy, healthy and productive.
- ↖ **Eden**—produces clusters of medium size that are frequently loose; berries above medium, roundish oval, black; flesh juicy, slightly meaty, tender, sweet, vinous and good. Recommended for those who desire an unusual pleasing flavor.
- ↖ **Fredonia**—is a good early black grape. The vine is vigorous, hardy, and productive if not pruned too severely. Clusters are medium in size, cylindrical, and compact; berries are large, and round; skin is thick and tough; flesh is juicy, solid but tender; very good. Fredonia has become our leading early black grape.
- ↖ **Golden Muscat**—was named for its color and muscat flavor. The vine is vigorous, productive; the clusters are very large, tapering, single-shouldered, and compact; the berries are large, oval, juicy, tender, sweet, vinous and aromatic. Requires season about 10 days longer than that of Concord.
- ↖ **Hanover**—has clusters medium to large, compact; berries medium, slightly oblong, dark red; flesh slightly tough, sweet, vinous, and good in quality; ripens about October first. Still on trial but most promising.
- ↖ **Hector**—is an attractive red grape. Vine is strong, vigorous, and productive; clusters large, compact; berries medium, roundish oval, medium red; flesh slightly meaty, juicy, sweet, vinous and good. Season after Concord. Promising for table and wine uses.
- ↖ **Kendaia**—is an early black that ripens about with its sister Athens. The vine is very vigorous, hardy and productive. Clusters are medium to large, shouldered and fairly compact; berries large as Concord, similar in color, roundish, oval and persistent; skin medium thick and tough; flesh juicy, sweet

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with a pleasing aroma and good. Recommended for those areas with a short season.

Keuka—has medium sized bunch and berry. The berries are round-oval, dark red with heavy bloom which gives them a lilac color. The flesh is crisp and juicy with a sweet, vinifera flavor, and scarcely separates from the tender skin so that the berries may be eaten skin and all. The vines are vigorous, healthy, productive, medium hardy, and ripen their crop with Catawba. Recommended for trial where seasons are long and winter cold is not severe.

Naples (Geneva #17594)—A productive red grape derived from a cross between Delaware and a (Mills x Iona) seedling. Clusters are larger and less compact than those of the Delaware and berries are larger and have a tougher skin. Fruit has appearance and flavor of Delaware but ripens about one week later. Flesh is slightly tough, juicy, sweet and good in quality. Promising for table and wine.

Ontario—comes in season before its parent Winchell, hitherto the best early green grape. Bunches and berries are larger and more attractive in appearance, and its vines are more vigorous and more productive. Ontario and Portland are becoming the standard early green grapes in eastern America.

Portland—holds first place among grapes as an early green variety for the market. The vine is very vigorous, hardy, productive and healthy. The variety is remarkable for its luxuriant and persistent foliage. Bunches and berries are larger than those of any other early green grape. In soils where vine lacks vigor, Portland should be grafted onto Clinton or other vigorous stocks.

Ruby—is an attractive red grape that ripens about the last week of September. Vine is vigorous, hardy and productive; clusters medium to large, tapering, shouldered, fairly compact with medium roundish oval berries; flesh juicy, tender, almost melting, sweet with a very agreeable and pleasing vinous flavor; skin has enough thickness and toughness to make it an excellent keeper. Promising for both home and commercial use.

Schuylerville—has large, cylindrical and well filled clusters. The fruit ripens to a blue-black color at Geneva about September 5 or more than three weeks before Concord and has an attractive, heavy bloom. The skin is tough enough to withstand handling but is not objectionable from the standpoint of eating since it is not a "slip-skin" variety. The flavor is sweet with a vinous tang resembling that of Zinfandel. Schuylerville bears heavily on spur and sucker shoots and must be pruned more closely than most American varieties to avoid overbearing. The foliage is susceptible to downy mildew and requires thorough spraying to control this pest. The vine is less hardy than many American varieties but compares favorably with Seneca, Golden Muscat and Dutchess. Temperatures of -20°F have injured the wood of this variety.

Seibel #1000—A French-American hybrid originated in France by Mr. Seibel. Vine is hardy, vigorous and moderately productive. Clusters and berries are medium in size. Flavor is sweet and neutral. Juice is uncolored and produces

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either a white or slightly pinkish wine. Color is black, ripens with Concord.

↖ **Seneca**—is almost a pure vinifera, ripening with Ontario. The bunches are of medium size, tapering, compact; berries oval and yellow. The texture is firm like that of a true vinifera, melting and tender, while the flavor is sweet, vinous, and aromatic. The skin can be eaten with the berry. The vine is vigorous and productive. Seneca is highly recommended for dessert. Requires spraying to prevent mildew.

↖ **Sheridan**—is a promising late-keeping grape to extend the season of Concord. Its vine is vigorous, healthy, hardy, and productive; its bunches large and compact; its berries firm and large; and its flavor sweet and rich. Season a week later than that of Concord. Sheridan is popular where it ripens.

↖ **Steuben**—appears to have real commercial possibilities for eastern grape growers. Its blue black fruit ripens a day or two after Concord or October 1st at Geneva. It bears long tapering clusters which are compact and often shouldered or double. The berries are of medium size and have a very heavy bloom. The flavor is sweet and free from foxiness but has a distinctive spicy tang. The skin is tough and the variety keeps very well in cold storage. The vines are vigorous, productive and hardy. A full crop of fruit was borne by Steuben in 1943 after exposure to -20°F the preceding winter. Blackrot has been reported in areas subject to this disease.

↖ **Urbana**—requires a long season and cannot be grown with certainty where Catawba does not ripen. The vines are vigorous, healthy, and productive, and will withstand as much cold as Catawba. Bunch and berry are large and very attractive. The berries are light red with skins which cling to the pulp like that of a vinifera, and the flesh separates readily from the two or three small crackling seeds. The flesh is firm but tender, juicy, aromatic, and has a rich, sweet, vinous, spicy, refreshing flavor. The grapes keep well in common storage.

↖ **Van Buren**—most promising, very early, black grape introduced. Cluster medium to above, compact; berry little smaller than Concord, and equal if not superior to Concord in quality. For roadside markets and home, it should prove most valuable.

↖ **Westfield**—ripens before Concord and resembles it in color. Clusters are medium and very compact; berries medium and firm; juice exceptionally highly colored.

↖ **Yates**—is a promising red grape. Vine is vigorous, productive; clusters large, conical, medium compact; berries large, attractive, medium red; flesh juicy, nearly melting, sweet, vinous, pleasing, good. Ripens after Concord. Well worthy of trial for table and wine use.

SEEDLESS GRAPES

Dr. A. B. Stout, formerly of The New York Botanic Garden, has cooperated with The New York State Agricultural Experiment Station for over 30 years in

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the breeding of seedless grapes. One of the best parental types for giving seedlessness, as well as good quality, is the Sultanina (Thompson Seedless of California). Stout Seedless, the first to be introduced, has been discontinued as it was frequently winter injured. Sultanina crossed with Ontario gave the Interlaken Seedless, Himrod and Romulus. Bronx Seedless, a large red seedless was obtained from a cross between a Goff and Iona seedling and Sultanina.

▲ **Bronx Seedless**—a large-clustered, large-berried grape obtained from a cross between a seedling and Sultanina, a seedless variety grown in California. The berries are oval, light red, melting, juicy and good in quality. During wet seasons skin is liable to crack. Seeds are soft and pulpy and are eaten with flesh.

▲ **Concord Seedless**—probably a sport of the Concord. Fruit resembles Concord in color and flavor but the clusters and berries are small. Occasionally seed is present but usually berries are seedless. Has possibilities for pie stock.

▲ **Interlaken Seedless**—is a promising seedless grape for the eastern United States. Its medium sized clusters are well filled with berries about the size of Delaware. The fruit ripens to a rich golden yellow color. At Geneva it ripens about September 1 or a full month before Concord. The fruit is very sweet and the flavor blends that of Ontario and Thompson Seedless. The flesh is meaty and crisp and adheres to the skin. The vine compares favorably with that of Golden Muscat, Seneca, and Delaware in hardiness. Temperatures of -20°F may be expected to injure the wood of Interlaken Seedless.

▲ **Himrod (Geneva #15310)**—a sister seedling of Interlaken Seedless, ripening slightly earlier. Its clusters are large and rather loose; berries medium, oval, sweet, yellow, vinous and good. Variety being sent out for trial as its vine has been hardier than Interlaken Seedless and its clusters larger.

▲ **Romulus (Geneva #15291)**—Another sister ripening about two weeks later than Interlaken Seedless. Vine productive; clusters large, compact; berries small, yellow, sweet, vinous non-foxy flavored, quality good.

ELDERBERRY

The elderberry of the fields and fence-rows has always been popular for pies and home-made wine. It grows readily under domestication as a beautiful ornamental and is as easily improved in the breeder's hand as any other native fruit.

▲ **Adams**—is a selection made by the late William W. Adams, Union Springs, New York. The bush is strong, vigorous, and productive, and the fruit clusters and berries are exceptionally large. This fruit is a splendid example of what the plant-breeder can do in improving native fruits.

GOOSEBERRIES

EARLY MID-SEASON	Parentage	Where Orig.	Year Introd.
Poorman	Unknown	Utah	1896
LATE Fredonia	Unknown	N. Y. Sta.	1927

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In order to stimulate the culture of gooseberries the Experiment Station at Geneva has aimed to obtain gooseberries with larger fruits, better flavor, and of better plant characters. Poorman was introduced a number of years ago as a better gooseberry, and where it succeeds it is a most admirable sort. Unfortunately it does not do well on sandy soils, thriving only on clays and fertile loams.

✓ **Fredonia**—is a very large, late, dark red gooseberry of the English type. The fruit is good in quality and attractive in appearance, and keeps and ships well. The plants are vigorous, productive, and of an open habit of growth that makes harvesting easy. Every garden should have a few Fredonias.

✓ **Poorman**—possesses the highest quality of fruit and one of the largest, healthiest and most vigorous bushes of any variety in the Station collection. The fruit is large, red, and very attractive. The plants are productive. This is a splendid gooseberry in heavy soils.

RASPBERRIES

The Station has introduced several new raspberries which in some respects are definitely superior to the standard sorts in the trade. All of the following are offered as well worthy of trial for the purposes indicated.

B—black, P—purple, R—red

Where Orig.	Year Introd.
Very Early and Fall Bearing	Parentage
✓ Indian Summer R (Empire × Herbert) × L. George	N. Y. Sta.
September R Marcy × Ranere	" 1947
Early	
✓ Evans B	Watson Prolific × Honeysweet
Mid-Season	
Newburgh R	Newman × Herbert
Sodus P	Dundee × Newburgh
Bristol B	Watson No. 1 × Honeysweet
Dundee B	Smith No. 1 × Palmer
Taylor R	Newman × Lloyd George
Late	
Marion P	Bristol × (Newman × Herbert)
Milton R	Lloyd George × Newburgh

BLACK RASPBERRIES

✓ **Bristol**—is one of the best black raspberries being grown at Geneva. In season it is a week earlier than Naples, which makes it a good variety to plant with that sort to lengthen the season. The berries are large, firm, fairly glossy, attractive, and of excellent quality. The bushes are hardy, vigorous, and bear very heavy crops. Bristol is worthy of extensive trial for market and home use.

✓ **Dundee**—is a promising new black raspberry notable for its high quality. The

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berries are large, glossy black, attractive, moderately firm, mildly subacid and very good. The plants are tall, vigorous, productive, and moderately resistant to mosaic. Dundee is well worth trying for market or home use.

RED RASPBERRIES

- ~ **Milton**—is a late variety for market and home use. The berries are large, long conic, resembling those of the Taylor in size and shape. They are attractive, bright red, firm, not crumbling, mild subacid and good. It ripens two or three days later than Taylor and Latham. The plants are vigorous, productive and hardy. Milton has remained free from mosaic, in a test planting, in the Hudson Valley where numerous other varieties soon become infected. This freedom from mosaic is an important reason why the seedling was named and introduced for more extensive testing by growers.
- ~ **Newburgh**—is proving to be a very satisfactory berry for market purposes. The fruit is very large, very firm, and does not crumble. The color is a bright, attractive red; in keeping and shipping quality it has no superior. The plants are vigorous, hardy and very productive, the weight of the fruit is so great that the canes are often bent to the ground. The fruit is borne out in the open where it may be readily picked. Under average conditions such as prevail in central and western New York, mosaic is rarely serious in Newburgh. In season it is three or four days earlier than Cuthbert. The canes should be cut back about one fourth to one third at the regular dormant pruning in early spring, since this variety tends to overbear if not cut back. This should improve the picking quality somewhat.
- ~ **September**—a new autumn fruiting red raspberry. Was offered in 1947, for the first time. The fall crop begins ripening in early September or about a month earlier than Indian Summer and continues until frost. The summer crop is as early as Indian Summer. The berries are of medium size, or about as large as Latham, bright red, firm, not crumbling, but showing a tendency to cling to the torus until fully ripe. The quality is fair in the summer and good in autumn. The plants are vigorous, healthy, hardy and productive at Geneva. This variety is introduced for trial for home use.
- ~ **Taylor**—is offered for trial for both market and home garden. The plants are usually vigorous, hardy, productive, tall growing, and increase rapidly. Taylor is more subject to mosaic than Newburgh, and the necessary control measures for that disease should be followed. The sturdy canes hold the berries well off the ground. The berries ripen shortly before Milton and are subacid and of excellent quality.

PURPLE RASPBERRIES

- ~ **Marion**—introduced in 1937, as a very large, late, purple raspberry to follow Sodus. The berries are very large, holding up well in size through the season, moderately juicy, firm, tart, and good in quality. They tend to cling

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to the bushes, but not sufficiently to be seriously objectionable. Marion ripens about a week later than Sodus and will serve to prolong the season for berries of that type. The plants are vigorous, bear heavy crops, are hardy and resemble the red raspberry more than the black raspberry in appearance. Propagation is by tip layering although a few suckers are produced.

→ **Sodus**—this variety is the most promising new purple raspberry on the Station grounds. It originated from the cross between the Dundee black raspberry and the Newburgh red raspberry. The berries are very large, firm, medium purple in color, sprightly and good in quality. The plants are very vigorous, very productive, and hardy. Sodus is more resistant to drought than Columbian and yields a good crop every year. It ripens shortly after Latham. This variety has replaced the Columbian, our former standard variety.

BLACKBERRIES

Blackberry varieties that are available have been generally unsatisfactory. These two new varieties, as grown at Geneva, appear to have sufficient merit to warrant their introduction for more extensive trial for market and home use.

BLACKBERRY	Parentage	Where Orig.	Year Introd.
Hedrick	Eldorado × Brewer	N. Y. Sta.	1950
Bailey	Unknown	"	1950

Hedrick—Plants are vigorous, productive and hardy. Berries large, medium firm with no core; flavor subacid. Season is late July.

Bailey—Plants are vigorous, productive and hardy. The berries are somewhat larger than Eldorado, moderately firm, without core, subacid and of good quality. The season is early August about one week later than Hedrick. Offers promise as a commercial variety.

STRAWBERRIES

The following new strawberry varieties from the breeding work at Geneva have shown considerable promise at Geneva and elsewhere and are considered worthy of extensive testing for the purposes indicated in the descriptions.

Variety	Cross	Where Orig.	Year Introd.
Essex	Howard (Premier) × Deutsch Evern	N. Y. Sta.	1951
Empire	Dresden × Sparkle	"	1951
Erie	Sparkle × Howard	"	1951
Eden	Dresden × Fairfax	"	1952

→ **Essex**—Plants vigorous, moderately productive, and producing runners freely. Berries medium size, soon becoming small, light red, glossy, blunt wedge conic; skin tender; flesh red, soft, subacid, good, ripening 5 days or more before Howard (Premier). Principal merits of this variety are unusually early and good quality. Its faults are small size and tender skin. This is suggested for trial for home use to lengthen season for home garden strawberries of superior quality.

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↖ **Empire**—Plants are vigorous, heavy yielding and produce runners freely. Berries are large, maintaining size well, conic to wedge conic, very glossy light red; flesh light; skin slightly tougher than Howard (Premier) and quality better. Ripens 4 to 6 days after Howard. Principal merits of this variety are productiveness, unusually attractive appearance, large size: Its faults are light flesh color and not suitable for processing. Suggested for market and home use.

↖ **Erie**—Plants vigorous, heavy yielding and producing runners freely. Berries large, maintaining size well, conic, bright medium red; skin medium tough; flesh red, quality equal to Howard (Premier) and ripening 5 to 8 days later. Principal merits of this variety are heavy crop, attractiveness, lateness, large size. Its fault is lack of high quality. Suggested for trial for market where a late sort is desired.

↖ **Eden**—Plants vigorous, productive and producing runners freely. Flowers well above foliage and fruit held off ground to some extent. Berries large, maintaining size well, wedge conic medium red, glossy; skin tough; flesh deep red to center, firm, tart, fair to good, ripening with or slightly before Sparkle. Its principal merits are tough skin, firm flesh, large size and productiveness. Tests at Geneva indicate superior freezing quality. Processor tests indicate suitability for preserving and canning. Suggested for trial wherever a processing berry is wanted. Probably suitable for many fresh fruit markets.

FILBERTS

All varieties of filberts are self-unfruitful so ample provision for cross pollination by including two or more varieties in any planting is recommended. At least one of these varieties should have hardy catkins.

↖ **Cosford**—Nuts are of medium size and are the thinnest shelled of all varieties. The tree is vigorous hardy and productive. Catkins are hardy.

↖ **Medium Long**—The nuts are slightly larger than those of Cosford and the shells are of medium thickness. The tree is vigorous, hardy and productive and the catkins are moderately hardy.

↖ **Italian Red**—Nut large, pointed, with medium thick shell, good in quality, tree very vigorous and one of the most productive. Catkins are moderately hardy.

CURRENTS

↖ **Stevens #9**—a recent introduction distributed by The Central Experimental Farm, Ottawa. Bushes are vigorous, productive and somewhat spreading, clusters are medium to large and compact. Fruit large and of good quality, less acid than some. Ripens in midseason and has done well at Geneva.

POINTS TO CONSIDER BEFORE PLANTING

SOIL—Most kinds of fruit thrive best on deep, well drained and friable soils. Pears and plums will grow better on heavy soils, while the peach, cherry and strawberry prefer a lighter soil type.

AGE OF TREES—The youngest plant available will transplant best. One year peaches and sweet cherries are most satisfactory and either one or two year trees of apples, pears and plums may be planted. Older trees do not have any advantage.

TIME TO PLANT—Fall planting is favored for most fruits except in the colder areas. Spring planting is preferred for peaches as they may be winter-injured when planted in the fall.

AIR DRAINAGE—Avoid frost pockets.

HARDINESS—The degree of cold that causes injury depends on variety and maturity of plant. Fruit buds of peach may be winter-injured at -10 to -15°F., sweet cherries at -20°F., pears at -25°F., and grapes at -15° to -25°F.

POLLINATION—It is considered good insurance to have at least two or three compatible varieties in the same planting. This is true of all tree fruits, except the self-fruitful peaches.

SELECTION OF VARIETIES—This depends on the length of season to ripen the fruit, the resistance to cold and the use for which the fruit is desired. Such varieties as Eden strawberry, Milton raspberry and Red-haven peach are excellent varieties for freezing.

LANDSCAPE VALUE—Most fruits can be used in the background as ornamentals and at the same time produce some fruit for home use. Raspberries, blackberries, grapes, elderberries and filberts make excellent hedges. Currants, gooseberries, blueberries and Tomentosa are fine for border plantings. Tree fruits can be planted about the grounds as specimen trees. Ornamental crab apples and dwarf fruits are especially desirable for this purpose.

TIME OF BEARING—Small fruits require two years, grapes and peaches three to four years, plums and cherries five years, apples and pears five to eight years depending upon variety. Apple and pear trees on dwarfing rootstock bear two to three years earlier than when growing on a standard seedling rootstock.

SPACING TO PLANT—

Fruit	Spacing	No. Plants per Acre
Apple—standard.....	35 × 35	35
" on Malling II.....	20 × 30	72
" " VII.....	15 × 25	116
" " IX.....	10 × 20	218
Pear.....	30 × 30	48
" —dwarf.....	10 × 20	218
Cherries, peaches, apricots, nectarines.....	25 × 25	70
Plums.....	20 × 20	108
Grapes.....	8 × 10	545

<i>Fruit</i>	<i>Spacing</i>	<i>No. Plants per Acre</i>
Red raspberries and blackberries.....	2 \times 8	2716
Black and purple raspberries.....	3 \times 8	1814
Currants, gooseberries, elderberries, blueberries.....	5 \times 10	871
Filberts.....	15 \times 15	198
Strawberries.....	2 \times 3½	6225

PLANTING TIPS

CARE ON ARRIVAL—If soil is not ready, heel the plants in moist soil in a shady spot. If roots are too dry, soak overnight in water.

HOW TO PLANT—Dig a hole large enough to allow all roots to be placed in their natural position. Cut back tips of broken roots. Set slightly deeper than they were in nursery. Place top soil around roots and pack firmly. Water will help the plant to start quicker. Set berries the same depth as they grew in the nursery.

PRUNING—It is important to cut back the tops to about one-half their length, leaving two or three well spaced branches and a leader. Care should be taken to make cuts to an outside bud and to avoid narrow crotches. One year old trees may be cut back to a whip at a point where the branches are desired. Prune grapes to two buds.

CULTIVATION—Young trees respond well to cultivation until August when a cover crop should be sown. Heavy mulch of straw, sawdust or grass can also be used.

PROTECTION FROM RODENTS—Protect young trees with $\frac{1}{4}$ " mesh wire guards $1\frac{1}{2}$ ft. high and 6" in diameter. Mounding with sand or cinders may be helpful. Poison bait applied in the fall is recommended.

FERTILIZATION—Well prepared and fertile soil will need no fertilizer the first year. Then $\frac{1}{4}$ lb. of nitrate of soda or it's equivalent should be applied for each year of it's growth, spreading it under the tree but away from the trunk.

SPRAY—Send for bulletin E812 to the address below.

For additional information write The New York State Agricultural Experiment Station, Geneva, N. Y., and ask for their list of publications.

FRUITS NOT PATENTED

The fruits in this catalog are not patented. Members of the New York State Fruit Testing Association are asked to propagate and distribute them to the uttermost.

In the words of an old English herbalist then,

"Forward in the name of God: graft, set, plant, and nourish up trees in every corner of your ground; the labor is small, the cost is nothing, the commodity is great; yourselves shall have plenty, the poor shall have somewhat in time of want to relieve their necessity, and God shall reward your good merits and diligence."